REMARKS

This is in response to the Office Action mailed on October 22, 2002 in which claims 1-24 are rejected. Corrected drawings for FIGS. 3, 4, 5, 6 and 8 are enclosed, with a Letter to the Draftsman, as requested by the Examiner.

35 U.S.C. § 102(e) - Rejections

Claims 1-6 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,181,531 (Koshikawa et al.). To anticipate a claim, the reference must teach, suggest, or disclose each and every element as set forth in the claim. *Verdegaal Bros v. Union Oil Co. of CA*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d. 1913, 1920 (Fed. Cir. 1989).

Amended claim 1 recites a slider for supporting a transducing head proximate a rotating disc. The slider includes a slider body, including a primary air bearing and a secondary air bearing, the slider body having a disc opposing face bounded by a leading edge and a trailing edge, where the transducing head is located on the disc opposing face proximate the trailing edge and on the secondary air bearing. The slider also includes means for permitting vertical movement of the transducing head with respect to the slider body in response to local disc surface topography to maintain head media spacing (HMS) between the transducing head and the disc substantially constant as the slider flies above the disc, wherein the means are exposed at the disc opposing face.

In regards to amended claim 1, it is respectfully submitted that Koshikawa et al. does not teach, suggest, or disclose each and every element as claimed. In the Office Action, the Examiner states Koshikawa et al. discloses "means (151a, 152a) for permitting vertical movement of the transducing head with respect to the slider body." First, Applicant disagrees with the Examiner as to what the means for permitting vertical movement are in the Koshikawa et al. patent. Applicant interprets Koshikawa et al. such that the support spring 154, including a plurality of parallel teeth 151a and 152a permit vertical movement of head element 152b. Second, whether the Examiner's definition of Koshikawa et al. or the Applicant's definition is used, Koshikawa et al. does not teach, suggest, or disclose the invention described in claim 1 of the present application.

Koshikawa et al. discloses an actuator including a portion of movable section 152 other than the head element 152b (i.e., 152a), stationary section 151 (including 151a) and support spring 154 which are covered by a cover portion 151b of the slider body. (col. 15, lns 26-30). The actuator is covered to prevent it from being exposed to the surface of the recording medium and from unexpected contact with the recording medium. (col. 15, lns 30-33).

Claim 1 has been amended such that the means for permitting vertical movement of the transducing head is exposed at the disc opposing face. Thus, Koshikawa et al. does not teach, suggest, or disclose the means for permitting vertical movement because the actuator, including spring 154 and parallel teeth 151a, 152a, is covered to prevent exposure to the recording medium. Thus, the rejection to claim 1 should accordingly be withdrawn. Claims 2-6 depend from claim 1, and therefore are allowable as well.

35 U.S.C. § 103(a) - Rejections

Claims 7-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Koshikawa et al. in view of U.S. Patent No. 6,069,769 (Dorius et al.) and claims 12 and 21-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Koshikawa et al. in view of Dorius et al. (as applied to claims 7 and 17), and further in view of U.S. Patent No. 5,943,189 (Boutaghou et al.).

In an obviousness determination, the cited prior art must be analogous art in order to be considered relevant initially. *See, In re Clay* 966 F.2d 656, 23 U.S.P.Q.2d 1058 (Fed. Cir. 1992). Furthermore, if the cited prior art is found to be analogous, obviousness requires that there be a suggestion or motivation to modify the teachings of the cited prior art in order to achieve the invention at issue. *See, ASC Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992). A prior art reference must be considered in its entirety, that is as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1550, 220 U.S.P.Q. 303, 311 (Fed Cir 1983). To establish prima facie obviousness

of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCAP 1974).

Claim 7 recites a slider for supporting a transducing head proximate a rotating disc. The slider includes a primary air bearing having a disc opposing face bounded by a leading edge and a first trailing edge, with an air bearing surface defined on the disc opposing face. The slider also includes a secondary air bearing having a disc opposing face bounded by a front edge and a second trailing edge, with the air bearing surface defined on the disc opposing face and the air bearing surface having a pad proximate the second trailing edge with the transducing head located on the pad. An interface having a disc opposing face connects the secondary air bearing to the primary air bearing, wherein the interface displaces the transducing head vertically with respect to the primary air bearing to maintain HMS between the transducing head and the disc substantially constant as the slider flies above the disc.

Claim 17 recites a slider for supporting a transducing head proximate a rotating disc. The slider includes a slider body having a disc opposing face bounded by a leading edge and a trailing edge, the slider body having a longitudinal axis. An air bearing surface is defined on the disc opposing face, the air bearing surface having a pad proximate the trailing edge, with the transducing head located on the pad. The slider also includes an interface defined on the disc opposing face of the slider body and substantially surrounding the transducing head, where the interface displaces the transducing head vertically with respect to the slider body to maintain HMS between the transducing head and the disc substantially constant as the slider flies above the disc.

Koshikawa et al., Dorius et al., or a combination of the two do not teach or suggest a slider as claimed in independent claims 7 and 17 of the present application. In particular, each and every claim limitation of both claim 7 and 17 are not taught or suggested by the combination of Koshikawa et al. and Dorius et al.

Claim 7 requires that the interface have a disc opposing face. The interface of Koshikawa et al. as defined by the Examiner is the plurality of parallel teeth 151a and 152a. As discussed above with respect to claim 1, the plurality of teeth are covered by cover portion 151b of the slider body to prevent those parts of the actuator from being exposed to the surface of the recording medium and from unexpected contact with recording medium. Thus, the combination of

Koshikawa et al. and Dorius et al. does not teach the interface element of claim 7. Furthermore, Koshikawa et al. teaches away from the interface of the claim 7 having a disc opposing face because the parallel teeth are required to be covered to prevent exposure to the recording medium.

Claim 17 includes an interface defined on the disc opposing face of the slider body. Because the combination of Koshikawa et al. and Dorius et al. does not include an interface which is defined on the disc opposing face of the slider body, that combination cannot teach each and every element of independent claim 17. Again, the Examiner states the interface is disclosed by Koshikawa et al. by the plurality of parallel teeth 151a and 152b. However, as discussed above with respect to claims 1 and 17, the plurality of teeth are covered by cover portion 151b of the slider body to prevent that part of the actuator from being exposed to the surface of the recording medium and from unexpected contact with the recording medium. Furthermore, Koshikawa et al. teaches away from the interface of claim 17 being defined on the disc opposing face because the parallel teeth are required to be covered to prevent exposure to the recording medium. Thus, the combination of Koshikawa et al. and Dorius et al. does not teach the interface element of claim 17, the rejection to claim 17 should be withdrawn and claim 17 should be allowed.

Since independent claims 7 and 17 are allowable, dependent claims 8-16, which depend from claim 7, and dependent claims 18-20, which depend from claim 17, are allowable as well.

With respect to the rejection of claims 12 and 21-24 as being obvious over Koshikawa et al. in view of Dorius et al., as applied to claims 7 and 17, and further in view of Boutaghou et al., claim 12 depends from allowable claim 7 and claim 21 depends from allowable claim 17, thus claims 12 and 21 are allowable as well.

Claim 22 recites a slider for supporting a transducing head proximate a rotating disc. The slider includes a primary air bearing having a disc opposing face bounded by a leading edge and a rear edge and a secondary air bearing having a disc opposing face bounded by a front edge and a trailing edge. An air bearing surface is defined on the disc opposing faces of the primary and secondary air bearings, the air bearing surface having a pad proximate the trailing edge of the secondary air bearing wherein the transducing head is located on the pad. The slider also includes a spring exposed at the air bearing surface and connecting the front edge of the secondary air bearing

to the rear edge of the primary air bearing wherein the spring displaces the transducing head vertically with respect to the primary air bearing to maintain HMS between the transducing head and the disc substantially constant as the slider flies above the disc.

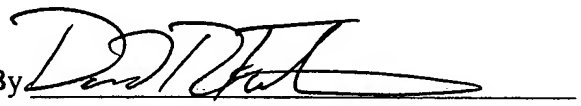
As discussed above with respect to claims 7 and 17, Koshikawa et al. combined with Dorius et al. does not teach or suggest all the claim limitations of claim 22 because neither reference, nor a combination of the reference teaches a spring exposed at the air bearing surface. The spring 154 of Koshikawa et al. as identified by the Examiner is covered by cover portion 151b of the slider body such that it is prevented from exposure to the surface of the recording medium and from unexpected contact with the recording medium.

Koshikawa et al. in view of Dorius et al., and further in view of Boutaghou et al. does not teach or suggest a spring which is exposed at the air bearing surface. Furthermore, Koshikawa et al. teaches away from the spring of claim 22 exposed at the air bearing surface because the parallel teeth are required to be covered to prevent exposure to the recording medium. Thus, the rejection to claim 22 should accordingly be withdrawn because the combination of prior art references does not teach or suggest all the claim limitations of claim 22. Claims 23 and 24 depend from 22, and are therefore allowable as well.

Respectfully submitted,

KINNEY & LANGE, P.A.

Date: 12/12/02

By 

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APPENDIX:
MARKED UP VERSION OF SPECIFICATION AND CLAIM AMENDMENTS

1. (Amended) A slider for supporting a transducing head proximate a rotating disc, the slider comprising:

a slider body, including a primary air bearing and a secondary air bearing, the slider body having a disc opposing face bounded by a leading edge and a trailing edge wherein the transducing head is located on the disc opposing face proximate the trailing edge and on the secondary air bearing; and

means for permitting vertical movement of the transducing head with respect to the slider body in response to local disc surface topography to maintain head media spacing (HMS) between the transducing head and the disc substantially constant as the slider flies above the disc <u>wherein the means are exposed at the disc opposing face</u>.

7. (Amended) A slider for supporting a transducing head proximate a rotating disc, the slider comprising:

a primary air bearing having a disc opposing face bounded by a leading edge and a first trailing edge wherein an air bearing surface is defined on the disc opposing face;

a secondary air bearing having a disc opposing face bounded by a front edge and a second trailing edge wherein the air bearing surface is defined on the disc opposing face, the air bearing surface having a pad proximate the second trailing edge wherein the transducing head is located on the pad; and

an interface <u>having a disc opposing face, the interface</u> connecting the secondary air bearing to the primary air bearing wherein the interface displaces the transducing head vertically with respect to the primary air bearing to maintain head media spacing (HMS) between the transducing head and the disc substantially constant as the slider flies above the disc.

17. (Amended) A slider for supporting a transducing head proximate a rotating disc, the slider comprising:

a slider body having a disc opposing face bounded by a leading edge and a trailing edge, the slider body having a longitudinal axis;

an air bearing surface defined on the disc opposing face, the air bearing surface having a pad proximate the trailing edge wherein the transducing head is located on the pad; and

an interface defined <u>on the disc opposing face of</u> [in] the slider body and substantially surrounding the transducing head wherein the interface displaces the transducing head vertically with respect to the slider body to maintain head media spacing (HMS) between the transducing head and the disc substantially constant as the slider flies above the disc.

22. (Twice Amended) A slider for supporting a transducing head proximate a rotating disc, the slider comprising:

a primary air bearing having a disc opposing face bounded by a leading edge and a rear edge;

a secondary air bearing having a disc opposing face bounded by a front edge and a trailing edge;

an air bearing surface defined on the disc opposing faces of the primary and secondary air bearings, the air bearing surface having a pad proximate the trailing edge of the secondary air bearing wherein the transducing head is located on the pad; and

a spring exposed at the air bearing surface, the spring connecting the front edge of the secondary air bearing to the rear edge of the primary air bearing wherein the spring displaces the transducing head vertically with respect to the primary air bearing to maintain head media spacing (HMS) between the transducing head and the disc substantially constant as the slider flies above the disc.